## REMARKS

The application is amended herewith in a manner that is believed to place the same in condition for allowance at the time of the next Official Action.

At item 4 of the Official Action, claim 13 as it previously appeared in the case was again rejected for indefiniteness. The present amendment to claim 13 makes it clear which "determination" is being referred to in step H.

At item 5 of the Official Action, claims 1-17 were rejected as allegedly being anticipated by McNUTT U.S. Patent No. 6,341,331 in view of MATTSON U.S. Patent No. 5,717,893. That rejection is respectfully traversed, for the following reasons.

Applicant notes initially that each of the independent claims 1, 3, 13 and 16 is amended herewith so as to sharpen the definition of the invention as recited in those claims, by specifying that cache segment identifiers and access groups are defined for managing the cache memory by dividing all area of the cache memory into a plurality of segments, each corresponding to an access group. This feature, in combination with the use of input/output management means that, based on settings in a segment information table, identifies to which access group an input/output request from a host corresponds and that, considering a division size allocated to each segment, controls discarding data from the cache memory of each cache segment, ensures that, even if one host consecutively accesses the cache memory, these accesses do not affect the cache hit rate of the cache segment of the other host. Thus, in the present invention, the cache hit rate access from each host can be maintained high.

The official rejection concedes that McNUTT does not disclose storing a cache division size criterion in a segment LRU list, which is true; however, McNUTT is considerably more remote from the present invention than that limited concession would suggest.

In particular, the Official Action contends that, in McNUTT, the cache memory is divided into a plurality of cache segments, "each corresponding to an access group." See the Official Action at page 3, lines 3-7. Column 2, lines 54-62 of McNUTT are cited in support of that contention.

However, reference to that passage of McNUTT confirms that the reference in fact does not teach dividing a cache memory into a plurality of cache segments each corresponding to an access group. Rather, the term "groups" as used in McNUTT refers to a plurality of data segments, and the cache memory is divided into first and second caches based on granularity, with the finer-grained segments being allocated to the first cache and the coarser-grained groups being assigned to the second cache.

Thus, although McNUTT uses the terms "segments" and "groups," it is clear from the reference that the McNUTT segments do not correspond to the recited cache segments, and the McNUTT groups do not correspond to the recited access groups.

The proposed combination of references based on McNUTT is therefore fatally flawed before the secondary reference is even considered.

For its part, the secondary reference to MATTSON plainly does not remedy the shortcomings of McNUTT for reference purposes relative to the present claims. In MATTSON, a cache memory array is logically subdivided into one global partition, which is shared by all DataType access, and a plurality of DataType partitions, each of which is assigned to store data of one DataType (see column 8, lines 15-67 of MATTSON). Therefore, MATTSON, like McNUTT, neither discloses nor suggests dividing all area a cache memory into a plurality of cache segments, each of which corresponds to an access group.

Indeed, the cache memory area of MATTSON cannot reduce the influence on the content of the cache memory array by access from other DataTypes. For a given DataType, its cache hit rate depends on the number of blocks containing the data of the given DataType in the global partition, as well as the number of blocks dedicated to the given DataType in the DataType partition. The number of blocks containing data of the given DataType in the global partition varies from hour to hour. Even though the global partition contains data for the given DataType, five consecutive subsequent requests for other DataTypes will completely sweep out the data for the given DataType. Thus, the requests for the other DataType affect the content of the global partition. The cache hit rate of the certain DataType is influenced by the access from the other DataType.

Therefore, the above discussion highlighting certain differences between the amended claims and the applied prior art, is believed to demonstrate wherein there would have been no motivation to combine the references in the manner proposed, and that, even if the references were nonetheless so combined, the invention as recited in claims 1-17 would not have been achieved.

In view of the present amendment and the foregoing Remarks, therefore, it is believed that the application is now in condition for allowance on the basis of claims 1-17, as amended. Allowance and passage to issue on that basis are accordingly respectfully requested.

The Commissioner is hereby authorized in this, concurrent, and future replies, to charge payment or credit any overpayment to Deposit Account No. 25-0120 for any additional fees required under 37 C.F.R. § 1.16 or under 37 C.F.R. § 1.17.

Respectfully submitted,

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